

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332530

Luminaire Tested: **S124DIP-S350D1205U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332530
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1205U835-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5613.1 lumens
Efficiency: N/A
Efficacy: 133.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

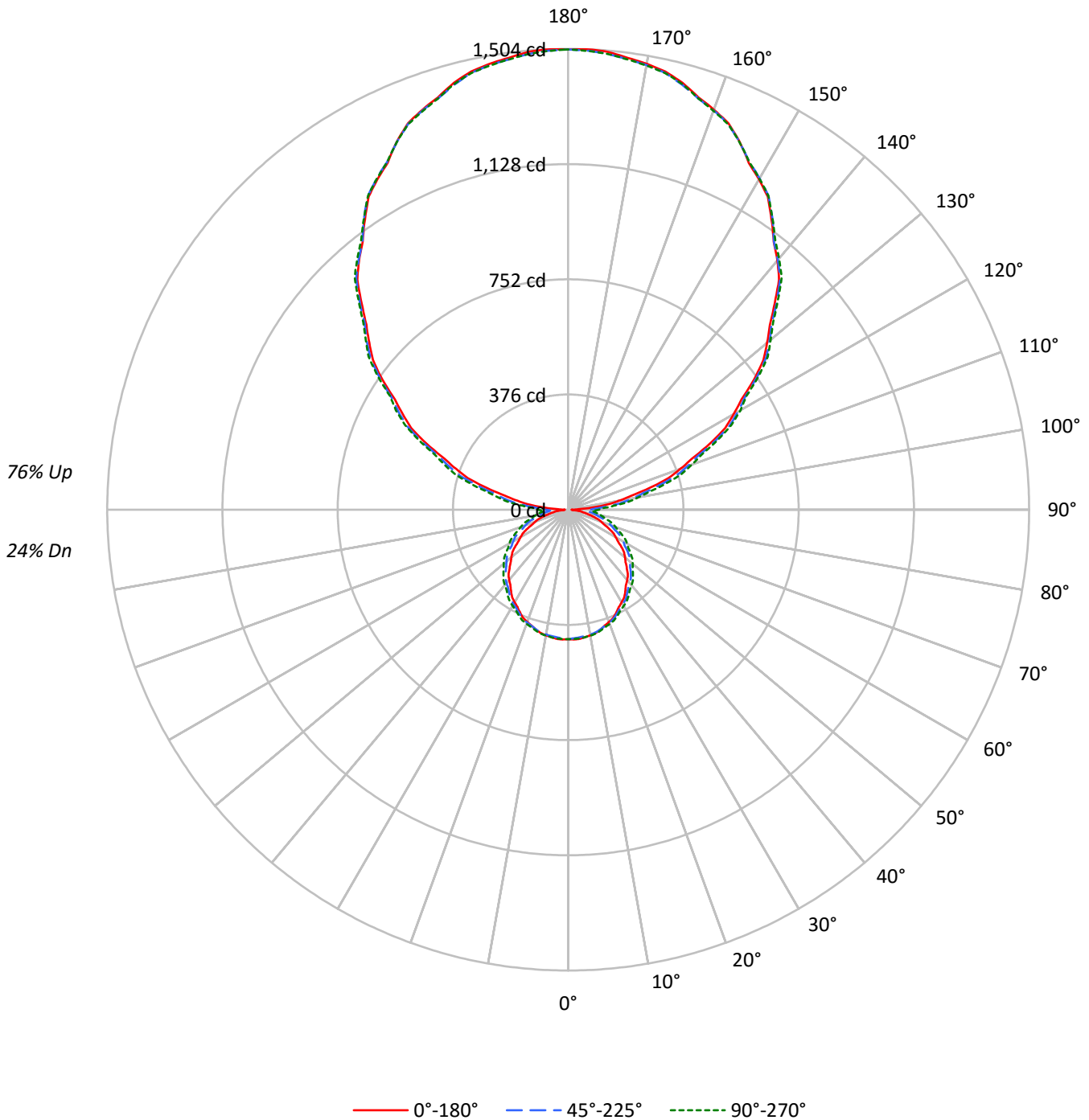
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19
2	83	76	70	65	73	67	62	58	52	48	45	37	35	33	24	23	21	16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	23	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	13	13	11	9	6
9	46	34	27	22	41	30	24	20	24	19	16	17	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3412	3412	3412
5°	3423	3335	3344
10°	3402	3281	3278
15°	3371	3217	3200
20°	3325	3147	3124
25°	3274	3070	3039
30°	3217	2992	2954
35°	3154	2912	2878
40°	3103	2836	2800
45°	3027	2766	2732
50°	2964	2686	2661
55°	2899	2610	2577
60°	2796	2513	2501
65°	2682	2410	2407
70°	2547	2292	2298
75°	2356	2161	2199
80°	2145	2037	2102
85°	1878	1926	2046



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	0.7
10°-20°	114.7	2.0
20°-30°	173.4	3.1
30°-40°	209.8	3.7
40°-50°	221.8	4.0
50°-60°	208.8	3.7
60°-70°	173.2	3.1
70°-80°	121.7	2.2
80°-90°	73.3	1.3
90°-100°	139.9	2.5
100°-110°	323.7	5.8
110°-120°	518.5	9.2
120°-130°	668.3	11.9
130°-140°	742.7	13.2
140°-150°	725.9	12.9
150°-160°	609.7	10.9
160°-170°	405.7	7.2
170°-180°	142.1	2.5
0°-30°	328.1	5.8
0°-40°	537.9	9.6
0°-60°	968.5	17.3
0°-90°	1336.6	23.8
90°-120°	982.1	17.5
90°-150°	3119.1	55.6
90°-180°	4277.0	76.2
0°-180°	5613.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	423	423	423	423	423	
5°	423	422	418	422	422	40
15°	406	406	405	409	408	114
25°	371	374	375	380	381	171
35°	325	330	335	341	343	203
45°	271	280	289	296	299	209
55°	212	222	236	245	248	189
65°	147	162	178	189	194	145
75°	81	99	119	132	136	87
85°	25	45	66	80	85	27
90°	11	43	72	92	99	9
95°	76	102	130	145	150	82
105°	275	286	308	323	330	292
115°	509	514	526	535	538	502
125°	740	740	750	756	757	659
135°	952	959	963	968	967	737
145°	1156	1160	1162	1163	1162	724
155°	1324	1324	1323	1327	1323	609
165°	1442	1438	1436	1442	1438	406
175°	1500	1494	1493	1500	1493	142
180°	1502	1502	1502	1502	1502	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	424.2	423.9	423.7	423.4	423.2	422.7	422.1	421.4	420.7	420.0	420.6
5°	423.2	422.8	422.5	422.2	421.9	421.4	420.6	419.9	419.2	418.4	419.3
7.5°	419.6	419.4	419.2	419.0	418.8	418.4	417.8	417.2	416.6	416.0	416.9
10°	416.5	416.4	416.3	416.2	416.1	415.8	415.3	414.7	414.2	413.7	414.6
12.5°	412.4	412.3	412.3	412.3	412.3	412.1	411.7	411.4	411.0	410.7	411.5
15°	405.6	405.8	405.9	406.0	406.1	406.0	405.6	405.3	405.0	404.7	405.6
17.5°	396.5	396.8	397.1	397.4	397.7	397.9	397.8	397.7	397.7	397.6	398.6
20°	390.0	390.3	390.7	391.0	391.3	391.5	391.6	391.7	391.8	391.9	393.0
22.5°	382.8	383.2	383.6	384.0	384.4	384.7	384.9	385.1	385.3	385.5	386.5
25°	371.1	371.7	372.4	373.0	373.6	374.1	374.4	374.7	375.0	375.4	376.5
27.5°	358.0	359.0	359.9	360.8	361.7	362.4	362.9	363.4	363.9	364.4	365.4
30°	349.3	350.2	351.0	351.8	352.7	353.5	354.2	354.9	355.7	356.4	357.6
32.5°	339.9	340.9	341.9	342.9	343.9	344.8	345.6	346.4	347.3	348.1	349.4
35°	324.7	326.0	327.2	328.5	329.8	330.9	332.0	333.0	334.1	335.1	336.6
37.5°	309.5	310.9	312.4	313.8	315.3	316.6	318.0	319.3	320.6	321.9	323.4
40°	299.6	301.0	302.4	303.7	305.1	306.5	308.0	309.5	310.9	312.4	314.0
42.5°	288.3	289.8	291.3	292.9	294.4	296.0	297.8	299.5	301.2	302.9	304.7
45°	270.7	272.7	274.7	276.7	278.7	280.7	282.7	284.7	286.7	288.7	290.5
47.5°	254.0	256.1	258.1	260.2	262.2	264.4	266.7	269.1	271.4	273.7	275.5
50°	241.9	244.2	246.5	248.8	251.1	253.4	255.8	258.1	260.4	262.7	264.8
52.5°	229.8	232.1	234.4	236.7	239.0	241.5	244.1	246.8	249.4	252.1	254.2
55°	212.1	214.3	216.5	218.7	220.9	223.6	226.7	229.9	233.0	236.2	238.3
57.5°	192.3	195.0	197.7	200.5	203.2	206.1	209.3	212.4	215.5	218.7	221.2
60°	179.4	182.1	184.9	187.6	190.3	193.4	196.9	200.4	203.8	207.3	209.7
62.5°	166.9	169.9	172.9	175.9	178.8	182.1	185.5	189.0	192.5	196.0	198.4
65°	146.7	150.1	153.5	156.8	160.2	163.7	167.2	170.8	174.4	178.0	180.6
67.5°	127.3	130.9	134.5	138.1	141.6	145.3	149.2	153.0	156.8	160.6	163.3
70°	114.1	117.6	121.2	124.8	128.4	132.2	136.2	140.2	144.2	148.2	151.0
72.5°	101.2	104.9	108.5	112.2	115.8	119.8	124.0	128.3	132.5	136.8	139.5
75°	81.4	85.3	89.2	93.1	97.0	101.1	105.6	110.0	114.4	118.8	121.8
77.5°	63.0	67.1	71.2	75.3	79.4	83.8	88.4	93.1	97.7	102.3	105.3
80°	51.6	55.8	60.0	64.2	68.4	72.8	77.5	82.1	86.7	91.4	94.5
82.5°	40.2	44.6	49.0	53.4	57.7	62.2	66.9	71.5	76.1	80.8	84.0
85°	25.1	29.5	33.9	38.3	42.8	47.3	52.1	56.8	61.5	66.3	69.4
87.5°	14.7	19.6	24.4	29.3	34.1	39.1	44.1	49.1	54.1	59.2	62.5
90°	11.1	18.1	25.2	32.2	39.2	46.1	52.7	59.2	65.8	72.4	77.0
92.5°	32.1	39.1	46.1	53.2	60.2	66.7	72.7	78.7	84.6	90.6	94.5
95°	75.9	81.7	87.5	93.2	99.0	105.0	111.1	117.2	123.4	129.5	133.1
97.5°	127.3	132.2	137.0	141.9	146.7	152.3	158.7	165.1	171.5	177.9	181.6
100°	167.9	171.6	175.4	179.2	182.9	188.0	194.5	200.9	207.3	213.7	217.1
102.5°	210.6	213.4	216.2	219.0	221.9	226.3	232.5	238.6	244.7	250.9	254.4
105°	275.0	277.3	279.7	282.0	284.4	288.0	293.0	297.9	302.8	307.7	311.2
107.5°	343.4	345.4	347.5	349.5	351.5	354.5	358.3	362.2	366.0	369.8	373.1
110°	389.5	391.5	393.5	395.5	397.5	400.2	403.6	407.0	410.4	413.9	415.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	437.5	438.9	440.3	441.7	443.1	445.3	448.4	451.4	454.5	457.5	459.7
115°	509.4	510.3	511.3	512.2	513.2	515.1	517.9	520.8	523.6	526.5	528.5
117.5°	577.6	578.4	579.2	579.9	580.7	582.5	585.2	588.0	590.8	593.6	594.9
120°	622.8	624.1	625.5	626.8	628.2	630.0	632.2	634.5	636.8	639.1	639.9
122.5°	670.2	670.6	671.1	671.6	672.1	673.6	676.1	678.6	681.1	683.7	684.9
125°	739.6	739.5	739.4	739.3	739.2	740.3	742.7	745.1	747.5	749.8	751.3
127.5°	803.0	803.6	804.3	805.0	805.7	806.8	808.4	810.0	811.6	813.2	814.6
130°	847.2	847.9	848.5	849.2	849.9	851.1	852.7	854.4	856.1	857.8	859.2
132.5°	892.8	893.2	893.7	894.1	894.6	895.4	896.5	897.7	898.8	900.0	901.3
135°	952.5	954.0	955.6	957.1	958.7	959.8	960.5	961.3	962.0	962.7	963.9
137.5°	1018.0	1018.6	1019.2	1019.8	1020.5	1021.1	1021.9	1022.7	1023.5	1024.2	1025.1
140°	1061.7	1062.1	1062.5	1062.9	1063.3	1063.6	1063.7	1063.8	1063.9	1064.0	1065.1
142.5°	1101.3	1101.8	1102.2	1102.7	1103.2	1103.3	1103.1	1102.8	1102.5	1102.3	1103.4
145°	1156.5	1157.4	1158.3	1159.2	1160.2	1160.8	1161.0	1161.3	1161.5	1161.8	1162.2
147.5°	1211.3	1212.4	1213.6	1214.7	1215.8	1216.3	1216.1	1215.9	1215.7	1215.5	1215.4
150°	1244.8	1245.7	1246.6	1247.5	1248.5	1248.9	1248.9	1248.9	1248.9	1248.9	1248.9
152.5°	1276.0	1276.6	1277.2	1277.8	1278.4	1278.8	1279.0	1279.2	1279.4	1279.6	1280.2
155°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.3	1324.1	1323.8	1323.5	1323.3	1324.3
157.5°	1365.3	1364.9	1364.4	1364.0	1363.5	1363.2	1363.2	1363.1	1363.1	1363.0	1363.8
160°	1389.5	1389.3	1389.0	1388.7	1388.5	1388.2	1388.0	1387.7	1387.4	1387.2	1388.0
162.5°	1411.8	1411.1	1410.5	1409.8	1409.1	1408.7	1408.4	1408.2	1407.9	1407.6	1409.0
165°	1441.8	1441.0	1440.2	1439.5	1438.7	1438.0	1437.5	1437.0	1436.5	1436.0	1437.5
167.5°	1464.8	1463.7	1462.6	1461.5	1460.5	1459.9	1460.0	1460.0	1460.1	1460.1	1461.7
170°	1477.8	1476.5	1475.2	1473.9	1472.6	1472.1	1472.4	1472.6	1472.9	1473.2	1474.7
172.5°	1487.1	1486.0	1484.9	1483.8	1482.8	1482.2	1482.3	1482.4	1482.4	1482.5	1484.2
175°	1499.9	1498.6	1497.3	1496.0	1494.7	1493.9	1493.7	1493.4	1493.2	1492.9	1494.7
177.5°	1504.1	1503.0	1502.0	1501.0	1499.9	1499.4	1499.4	1499.4	1499.4	1499.4	1500.9
180°	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	421.2	421.8	422.4	422.6	422.6	422.5	422.4	422.3
5°	420.1	420.9	421.8	422.2	422.1	421.9	421.8	421.7
7.5°	417.9	418.8	419.8	420.2	420.1	420.0	419.9	419.8
10°	415.6	416.5	417.5	417.9	417.8	417.7	417.6	417.5
12.5°	412.4	413.3	414.1	414.5	414.5	414.5	414.5	414.4
15°	406.6	407.5	408.5	408.9	408.8	408.7	408.6	408.5
17.5°	399.5	400.5	401.5	401.9	401.8	401.7	401.7	401.6
20°	394.0	395.1	396.1	396.7	396.7	396.7	396.7	396.7
22.5°	387.6	388.6	389.7	390.3	390.5	390.6	390.8	391.0
25°	377.7	378.8	380.0	380.6	380.7	380.8	380.9	381.0
27.5°	366.5	367.6	368.7	369.3	369.4	369.5	369.6	369.8
30°	358.7	359.9	361.0	361.7	361.9	362.2	362.4	362.6
32.5°	350.7	352.1	353.4	354.2	354.4	354.6	354.8	355.0
35°	338.1	339.5	341.0	341.9	342.2	342.5	342.9	343.2
37.5°	324.9	326.3	327.8	328.8	329.1	329.4	329.8	330.1
40°	315.6	317.1	318.7	319.7	320.1	320.6	321.0	321.4
42.5°	306.4	308.2	309.9	311.0	311.3	311.6	312.0	312.3
45°	292.3	294.1	295.9	297.0	297.6	298.1	298.6	299.1
47.5°	277.4	279.2	281.1	282.3	283.0	283.6	284.2	284.9
50°	266.9	269.0	271.1	272.5	273.1	273.7	274.4	275.0
52.5°	256.3	258.4	260.5	261.9	262.5	263.1	263.8	264.4
55°	240.4	242.5	244.6	246.0	246.6	247.2	247.9	248.5
57.5°	223.7	226.2	228.7	230.2	230.8	231.4	232.0	232.6
60°	212.2	214.6	217.0	218.6	219.5	220.3	221.2	222.0
62.5°	200.8	203.2	205.6	207.3	208.1	208.9	209.8	210.6
65°	183.2	185.9	188.5	190.2	191.1	191.9	192.8	193.6
67.5°	166.0	168.7	171.3	173.1	173.9	174.7	175.5	176.4
70°	153.8	156.7	159.5	161.3	162.0	162.8	163.5	164.2
72.5°	142.3	145.1	147.8	149.6	150.4	151.2	152.1	152.9
75°	124.7	127.6	130.6	132.5	133.5	134.4	135.4	136.3
77.5°	108.3	111.3	114.3	116.3	117.3	118.3	119.3	120.3
80°	97.7	100.8	104.0	106.0	106.8	107.7	108.5	109.3
82.5°	87.2	90.5	93.7	95.8	96.7	97.6	98.6	99.5
85°	72.6	75.7	78.9	81.0	82.0	83.1	84.1	85.2
87.5°	65.9	69.2	72.6	74.8	75.8	76.9	77.9	78.9
90°	81.6	86.2	90.8	93.8	95.2	96.5	97.9	99.2
92.5°	98.4	102.3	106.2	108.7	109.9	111.0	112.2	113.3
95°	136.7	140.3	143.9	146.2	147.2	148.1	149.1	150.0
97.5°	185.3	188.9	192.6	194.9	195.8	196.7	197.6	198.5
100°	220.4	223.8	227.2	229.2	229.9	230.7	231.4	232.1
102.5°	257.8	261.3	264.8	267.0	268.1	269.1	270.1	271.1
105°	314.6	318.0	321.4	323.9	325.5	327.1	328.7	330.3
107.5°	376.5	379.8	383.1	385.1	385.8	386.5	387.2	387.9
110°	417.7	419.6	421.5	423.2	424.8	426.5	428.1	429.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	462.0	464.2	466.4	468.0	469.0	470.0	471.0	472.0
115°	530.6	532.6	534.7	536.0	536.4	536.9	537.4	537.9
117.5°	596.2	597.5	598.8	599.6	600.0	600.3	600.6	600.9
120°	640.7	641.5	642.3	643.4	644.8	646.1	647.5	648.8
122.5°	686.1	687.3	688.6	689.1	688.9	688.7	688.6	688.4
125°	752.8	754.3	755.8	756.6	756.7	756.8	756.9	757.0
127.5°	816.0	817.3	818.7	819.6	819.9	820.2	820.5	820.8
130°	860.5	861.9	863.3	863.8	863.4	863.0	862.6	862.2
132.5°	902.5	903.8	905.1	905.9	906.1	906.3	906.5	906.8
135°	965.1	966.2	967.4	967.9	967.8	967.6	967.5	967.3
137.5°	1026.0	1026.8	1027.7	1028.5	1029.1	1029.8	1030.5	1031.2
140°	1066.2	1067.3	1068.4	1069.1	1069.4	1069.7	1069.9	1070.2
142.5°	1104.6	1105.7	1106.9	1107.6	1108.0	1108.4	1108.8	1109.2
145°	1162.5	1162.9	1163.3	1163.3	1162.9	1162.6	1162.2	1161.9
147.5°	1215.2	1215.1	1215.0	1215.0	1215.0	1215.1	1215.2	1215.3
150°	1248.9	1248.9	1248.9	1248.8	1248.5	1248.3	1248.0	1247.8
152.5°	1280.8	1281.5	1282.1	1282.1	1281.4	1280.7	1280.0	1279.4
155°	1325.4	1326.4	1327.4	1327.4	1326.4	1325.4	1324.3	1323.3
157.5°	1364.6	1365.3	1366.1	1366.1	1365.2	1364.3	1363.4	1362.6
160°	1388.7	1389.5	1390.3	1390.0	1388.7	1387.4	1386.2	1384.9
162.5°	1410.4	1411.8	1413.2	1413.3	1412.0	1410.7	1409.4	1408.1
165°	1439.1	1440.6	1442.2	1442.4	1441.4	1440.4	1439.3	1438.3
167.5°	1463.2	1464.8	1466.3	1466.3	1464.7	1463.1	1461.5	1459.9
170°	1476.3	1477.8	1479.4	1479.2	1477.4	1475.6	1473.8	1472.0
172.5°	1486.0	1487.7	1489.5	1489.5	1487.6	1485.8	1484.0	1482.2
175°	1496.5	1498.3	1500.1	1500.1	1498.3	1496.5	1494.7	1492.9
177.5°	1502.3	1503.8	1505.2	1505.1	1503.4	1501.8	1500.1	1498.5
180°	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2

(END OF REPORT)